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ABSTRACT

Because such eating disorders as anorexia and bulimia have been found to be more common in women than in men, much recent research on these disorders has examined their relationship to gender roles. Some evidence exists supporting the existence of two types of eating disorders; one associated with stereotypically feminine concerns, the other associated with stereotypically masculine concerns. Two studies were conducted to test this hypothesis. In study 1, 184 females attending a state university were surveyed regarding bingeing behavior. In study 2, questionnaire data previously collected from 326 female college students were reanalyzed. In study 1, respondents who reported bingeing at a moderate frequency placed low importance on intelligence but not on homemaking, whereas frequent bingers placed low importance on homemaking but not on intelligence. In study 2, moderate bingers reported that their parents emphasized attractiveness but did not hold negative attitudes toward female intellectual and professional achievement. In contrast, frequent bingers reported that their parents held negative attitudes toward female achievement but did not emphasize attractiveness. It has become particularly difficult for researchers to become aware of the two types of eating disorders because both types are related to a thin standard of female bodily attractiveness. (10 references) (LLL)

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# Sex Roles and Eating Disorders:

# Evidence for Two Independent Relationships

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## Abstract

Contradictory findings regarding the relationship between eating disorders and gender roles may result from the existence of two types of eating disorders, one associated with stereotypically feminine concerns, the other associated with stereotypically masculine concerns. In study 1, respondents who reported binging at a moderate frequency placed low importance on intelligence but not on homemaking, whereas frequent bingers placed low importance on homemaking but not on intelligence. In study 2, moderate bingers reported that their parents emphasized attractiveness but did not hold attitudes negative toward female intellectual/professional achievement. In contrast, frequent bingers reported that their parents held attitudes negative toward female achievement but did not emphasize attractiveness.

Because such eating disorders as anorexia and bulimia have been found to be more common in women than in men, much recent research on these disorders has examined their relationship to gender roles. Such research has produced contradictory results with some studies finding eating disordered women scoring low on masculinity and high on femininity (e.g. Pettinati, Franks, Wade and Kogan, 1987,) others finding them scoring low on both masculinity and femininity (e.g. Lewis and Johnson, 1985,) and yet other studies finding a relationship between disordered eating and aspects of masculinity but not with femininity (e.g. Timko, Striegel-Moore, Silberstein and Rodin, 1987.)

We would suggest that these confusing findings occur because there are two distinct types of eating disorders, one of which is related to personal characteristics that are stereotypically associated with femininity while the other one is related to personal characteristics that are traditionally associated with masculinity. One "feminine" characteristic that may predispose women to the first type is the concern about appearance that may lead to striving for fashionably slim bodies. The "masculine" (according to traditional stereotypes) characteristic related to the development of the second type of eating disorder involves striving for intellectual and professional achievement. For example, Silverstein, Perdue, Wolf and Pizzolo (1988) hypothesized that eating disorders are likely to develop in young women who desire to achieve intellectually and professionally but who feel that in these areas, being female is a disadvantage. They found that bingeing was particularly frequent in female college students who reported that their parents believed that a woman's place is in the home, their mothers were unhappy with their own careers, their fathers thought that the respondents' mothers were not intelligent, or their fathers treated a male as the most intelligent sibling in the family.

Some evidence exists supporting the existence of the two types of eating

disorders. Based upon a cluster analysis of scores on the Eating Disorder Inventory, Garner, Olmsted and Garfinkel (1983) concluded that weight-preoccupied women can be divided into two groups: Normal dieters, who are high only on Drive for Thinness, Body Dissatisfaction, and Perfectionism, and another group that is characterized by elevated scores on all EDI subscales, indicating significant psychopathology. Using multiple regression analyses of questionnaire data obtained from female college students, Silverstein and Perdue (1988) found that whereas the extent of dieting and bingeing reported by their respondents were predicted by the importance they placed upon physical attractiveness, the extent of purgeing and underweight were predicted by the importance they placed upon intelligence or professional success but not by the importance they placed upon physical attractiveness.

Here, we extend these findings by demonstrating, using several measures of "feminine" and "masculine" concerns, that both of the two types of eating disorders can manifest themselves in a single symptom, bingeing, but that the symptom has different correlates for the two types.

## Study 1

### Method

In order to determine whether different patterns of bingeing are associated with different gender role concerns, we distributed a questionnaire to 184 females attending a state university. To measure bingeing in a manner that would allow relatively simple categorization into more and less serious bingeing, we used the question that was used by Silverstein, Perdue et al. (1988). Respondents were asked "How often do you eat uncontrollably to the point of stuffing yourself?" The 29 percent who reported never stuffing were classified as non-bingers. The 59 percent who reported stuffing themselves between once a month or less and three times a month were classified as

moderate bingers. The 12 percent who reported stuffing themselves at least once a week were classified as frequent bingers.

We used the single question because we felt that it was important for the purpose of studying different patterns of disordered eating that we be able to categorize people along a single, unambiguous dimension of seriousness of symptom. The instruments traditionally used to measure disordered eating include a variety of symptoms, including some that are behavioral and some that are "psychological". Scores on these instruments, even scores on individual subscales, include a number of dimensions of problem eating. Not knowing how these various dimensions related to our potential categorization according to sex role, we decided that we would be safer to focus on individual behaviors that could clearly be placed along a single dimension of seriousness that we thought that most people would agree on, namely the frequency with which the respondents reported exhibiting the problem behavior. We originally intended to analyze also different patterns of purgeing. But only 19 respondents reported ever using laxatives, diuretics or intentional vomiting to control their weight, and of these, 17 also reported at least moderate bingeing. As a result, we were unable to include purgeing in our analyses and, in order to avoid confounds, we dropped from our analyses all respondents who reported purgeing.

Gender role concerns were measured as in Silverstein and Perdue (1988). Respondents indicated, using a scale ranging from "1=Not at all" to "5=Extremely", how important they considered each of seven traits to be in order for a woman to feel satisfied. Of particular interest for this paper are the importance placed upon the stereotypically female concern with being a homemaker (results on this question were almost exactly the same as on the question regarding being a wife) and the stereotypically masculine concern

with intelligence (results on this question were quite similar to those on the question regarding professional success). For the question concerning homemaking, respondents were divided into a high importance group consisting of those 33 percent who answered "Very" or "Extremely" and a low importance group consisting of those 67 percent who answered "Not at all" "Slightly" or "Moderately". When these criteria were applied to the question concerning intelligence, however, 87 percent of the respondents were placed in the high importance group, which left too few respondents in some cells for $X^2$ analyses. As a result, for the importance placed upon intelligence, the high importance group was defined as those 39 percent of the respondents who answered "Extremely", while the low importance group consisted of all other respondents.

Results

Table 1 presents the data of the 163 non-purgeing respondents divided into three levels of bingeing and two levels of the importance placed upon female homemaking as well as two levels placed upon the importance of female intelligence. For each role concern, the data were statistically analyzed using two $X^2$ analyses, one in which the low and moderate bingers were compared (excluding the frequent bingers) in a 2 X 2 analysis, and one in which the frequent bingers were compared to all other respondents (collapsing the low and moderate bingers together) in a 2 X 2 analysis.

Looking at the table, it becomes apparent that frequent bingers place significantly less importance on homemaking than do the other respondents but that the moderate bingers do not differ from non-bingers on the importance placed upon homemaking. The data regarding the importance placed upon female intelligence stand in fascinating contrast to those regarding homemaking. The difference between the frequent bingers and all other respondents on this

measure is not significant while moderate bingers are significantly less likely than non-bingers to place great importance on female intelligence. Of methodological interest is the finding that when the measures of frequency of bingeing and importance placed upon homemaking and upon intelligence were not divided into categories but were related using a correlation coefficient, the results were nowhere near significant (Homemaking $r$ = -.04, $p$ = ns; Intelligence $r$ = .02, $p$ = ns).

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Place Table 1 about here

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Thus, in Study 1, frequent bingers are low on the importance placed on homemaking, a stereotypically female role concern, while moderate bingers are low on the importance placed upon intelligence, a stereotypically male concern, but no different than non-bingers on the "female" concern.

## Study 2

### Method

In order to further test the hypothesis that issues around stereotypically female and stereotypically male concerns independently relate to disordered eating, we reanalyzed the questionnaire data collected from 326 female college students by Silverstein, Perdue et al. (1988). They had their respondents use a 5-point Likert scale ranging from "1=Not at all" to "5=Extremely" to indicate the extent to which they believed that their parents exhibited a number of attitudes and behaviors.

In order to measure respondents' reports of parental attitudes around issues concerning achievement, we used the questions which Silverstein, Perdue et al. (1988) found to be significantly related to bingeing. Respondents were classified as reporting parental issues around female achievement if they reported any of the following: 1. Their mothers agreed (at least moderately)

that a woman's place is in the home. (Results for reports of fathers' attitudes on this question were quite similar.) 2. Their mothers were at least moderately dissatisfied with their own career choices. 3. Their fathers did not believe that the respondents' mothers were at least moderately intelligent. 4. Their fathers considered a brother to be the brightest child in the family. As discussed by Silverstein, Perdue et al., all of these questions deal with ways in which females might receive the impression that in the areas of receiving respect for intellectual and professional success, being female is a disadvantage. Forty nine percent of the respondents reported none of the above and were classified as low on the achievement issues index, while 51 percent reported one or more of the above and were classified as high on this index.

On the same questionnaire, respondents indicated, using a 5-point Likert scale, how often their fathers (results were similar for reports regarding mothers) stressed the importance of physical appearance. The 66 percent of the respondents who answered "never" or "rarely" were classified as low on the appearance issues measure while the 34 percent who answered "sometimes," "often," or "always" were classified as high.

We used the same question used in Study 1 to measure bingeing. Respondents were asked "How often do you eat uncontrollably to the point of stuffing yourself." The larger sample size in this study allowed us to use a more rigorous definition for moderate and frequent bingeing than was used in Study 1. The 64 percent of the respondents who reported stuffing themselves once a month or less were classified as low on the bingeing measure, the 25 percent who reported stuffing themselves somewhere between twice a month and twice a week were classified as moderate bingers, and the 11 percent who reported stuffing themselves more than twice a week were classified as

frequent bingers. In order to maintain comparability with Study 1, all respondents who reported using laxatives, diuretics or intentional vomiting to control their weight were dropped from the analysis. This did not affect the results.

Results

Table 2 presents the data of the non-purgeing respondents divided into three levels of frequency of bingeing and two levels of reported parental attitudes regarding both physical attractiveness as well as female achievement. Compared to non-bingers, moderate bingers were more likely to report that their fathers emphasized physical attractiveness. They were not significantly more likely than non-bingers to report that their parents held one of the attitudes negative toward female achievement. In contrast, frequent bingers were more likely than other respondents to report that their parents held attitudes negative toward female achievement but were actually (nonsignificantly) LESS likely to report that their fathers emphasized physical attractiveness. Similar to Study 1, when analyzed using a correlation coefficient, bingeing was not significantly related to reports of the emphasis placed by fathers on physical attractiveness ($r$ = .05, $p$ = ns).

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Place Table 2 about here

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Discussion

Some of the implications of these studies are methodological. Depending upon how bingeing and sex roles are measured and the statistic used to relate them, we can conclude that bingeing is related to low feminine concerns (frequent bingers in Study 1), low masculine concerns (moderate bingers in Study 1), or is unrelated to either feminine or masculine concerns (correlation coefficients in both studies). If we allow ourselves to make

some, as yet unproven, inferences regarding the issues affecting the respondents based upon the reports of parental attitudes in Study 2, or if we include the analyses of very similar measures reported by Silverstein and Perdue (1988), we can also conclude that bingeing is related to high feminine concerns (moderate bingers in Study 2 and multiple regression in Silverstein and Perdue) or that disordered eating is related to high masculine concerns (multiple regression on purgeing and percent underweight in Silverstein and Perdue).

Fairly small differences in the proportion of moderate and frequent bingers in the samples used in different studies may also lead to very different conclusions regarding the relationship between sex roles and eating disorders. Studies that use continuous statistics such as correlation and regression may not find any relationship between sex roles and disordered eating. On the other hand, depending upon the characteristics of the sample, these studies may find that measures of both femininity and masculinity correlate with disordered eating. If the researchers do not realize that the two types of measures are actually related to disordered eating among different subsets of their sample, they may conclude that women who exhibit disordered eating are androgynous (high feminine and high masculine) or undifferentiated (low feminine and low masculine). Noting both high feminine concerns and high masculine concerns, researchers might also conclude that women with eating disorders have extremely high standards or are what has sometimes been referred to as "superwomen" trying to do it all.

The truth is somewhat different than all of these possible findings would make it appear. Women who exhibit the more common but less severe symptoms of moderate bingeing (or dieting, see Silverstein and Perdue, 1988) appear to be stereotypically feminine, concerned with physical attractiveness and relatively unconcerned with intelligence or professional success. Women who

exhibit the more severe symptoms of frequent bingeing (or purgeing or underweight, see Silverstein and Perdue, 1988; Silverstein, Perdue et al., 1988) do not value feminine roles such as homemaking but do value intelligence and professional success and report that they have been exposed to parental attitudes that imply that women are at a disadvantage when pursuing academic/professional achievement.

It has been particularly difficult for researchers to become aware of the two types of eating disorders because both types are related to a thin standard of female bodily attractiveness. That is, when the fashionable standard of female bodily attractiveness is slim, women who are concerned with their appearance may be particularly likely to want to be slim and to develop eating disorders. At the same time, women who are concerned with intellectual/professional achievement are also particularly likely to want to be slim (Beck, Ward-Hull and McClear, 1976; Hawkins, Turell and Jackson, 1983.) To further complicate the problem, the standard of female bodily attractiveness appearing in popular womens' magazines becomes slim when the proportion of the female population concerned with achievement issues (as indexed by the proportion attending college or working as professionals) increases (Silverstein, Perdue, Peterson, Vogel and Fantini, 1986.) During these periods, eating disorders tend to become prevalent (Silverstein, Peterson and Perdue, 1986.)

When the number of nontraditional, professionally-oriented women, who prefer noncurvaceousness, increases, advertisers and the mass media may seek to attract the attention of these relatively affluent, influential women by using slimmer, less stereotypically feminine, models. Once this occurs, however, women who are more traditional may find themselves developing the yo-yo diet-binge syndrome in an attempt to live up to a slim standard of female

bodily attractiveness.

This process would explain the simultaneous appearance of a slim standard, a large number of women dieting and excercising in order to lose weight to meet the standard, and a smaller (but still large enough to attract the attention of scientists and the media) number of professionally-oriented women in colleges who binge, purge, and starve themselves. This constellation appeared in recent decades as well as during the 1920s (Silverstein, Peterson et al., 1986; Silverstein, Perdue et al., 1986). According to this view, however, severe eating disorders represent not extreme, pathological versions of women dieting to look attractive, but rather extreme, pathological versions of the desire of professional women, striving to achieve in a gender-biased society, to avoid curvaceousness.

Whether or not this explanation is correct, it appears that, as found by Garner et al., 1983, eating disorders do not represent a single continuum. Rather, in the studies reported here, the more severe disorders appear to be related to concerns that are stereotypically considered to be high masculine, low feminine, while the less severe disorders appear to be related to concerns that are stereotypically considered to be high feminine, low masculine. Future work on gender roles must take into account, and further explore, these two types of eating disorders.

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Table 1

Importance placed upon homemaking and intelligence by women who report various levels of frequency of bingeing

| | Number of women placing high versus low importance on each role concern* | | | |
|---|---|---|---|---|
| | Homemaking | | Intelligence | |
| | Importance | | | |
| Frequency of bingeing | Low | High | Low | High |
| Low | 30 (64) | 17 (36) | 24 (51) | 23 (49) |
| Moderate | 61 (64) | 35 (37) | 67 (70) | 29 (30) |
| High | 18 (90) | 2 (10) | 9 (45) | 11 (55) |

Homemaking:

High bingers versus all other respondents $\underline{X}^2 = 5.51$, $\underline{p} = .02$

Moderate bingers versus low bingers $\underline{X}^2 = 0.00$, $\underline{p}$ = ns

Intelligence:

High bingers versus all other respondents $\underline{X}^2 = 2.57$, $\underline{p}$ = ns

Moderate bingers versus low bingers $\underline{X}^2 = 4.78$, $\underline{p} < .03$

*The numbers in parentheses indicate the percentage of the women in each row of the table who report the denoted level of importance placed upon homemaking and upon intelligence.

Table 2

Parental attitudes regarding attractiveness and difficulty of female intellectual/professional achievement reported by women who report various levels of frequency of bingeing*

| | Number of women reporting that their: | | | |
|---|---|---|---|---|
| | Fathers placed high versus low emphasis on attractiveness | | Parents exhibited at least one attitude negative toward female professional achievement | |
| | Importance | | Number of negative attitudes | |
| Frequency of bingeing | Low | High | Zero | Greater than zero |
| Low | 113 (70) | 48 (30) | 84 (56) | 67 (44) |
| Moderate | 35 (55) | 29 (45) | 26 (43) | 34 (57) |
| High | 20 (71) | 8 (29) | 4 (19) | 17 (81) |

Father's emphasis on physical attractiveness:

High bingers versus all other respondents $\underline{X}^2 = 0.36$, $\underline{p}$ = ns

Moderate bingers versus low bingers $\underline{X}^2 = 4.89$, $\underline{p} < .03$

Parental attitudes negative toward female professional achievement:

High bingers versus all other respondents $\underline{X}^2 = 8.37$, $\underline{p} = .004$

Moderate bingers versus low bingers $\underline{X}^2 = 2.60$, $\underline{p}$ = ns

*The numbers in parentheses indicate the percentage of the women in each row of the table who report the denoted level of importance placed by their fathers upon physical attractiveness or the denoted number of attitudes negative toward female professional achievement.